



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/019,433 | 12/31/2001 | Takeo Kuroda | M&M-048-USA-PCT | 4222 |

27955 7590 03/06/2006

TOWNSEND & BANTA
c/o PORTFOLIO IP
PO BOX 52050
MINNEAPOLIS, MN 55402

EXAMINER

BERMAN, SUSAN W

ART UNIT PAPER NUMBER

1711

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/019,433 | Applicant(s) KURODA ET AL. | |
| | Examiner Susan W. Berman | Art Unit 1711 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-8,10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-8 and 12-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/07/2005 has been entered.

Response to Amendment

The rejection of claim 11 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over J 63-13969 is withdrawn as claim 11 has been canceled.

The rejection of claims 1, 3, 5-8, 10 and 12-21 under 35 U.S.C. 112, first paragraph, is withdrawn. Applicant has amended the specification to change "tensile shear modulus" to "dynamic shear modulus", as set forth in original claim 2.

Response to Arguments

Applicant's arguments filed 12-7-2006 have been fully considered but they are not persuasive.

With respect to the rejection of claims under 35 U.S.C. 112, second paragraph, the Examiner has not found any statement in claim 1 that sets forth that the proportions of compounds (B) to (D) are based on 100 parts by weight of compound (A). Therefore, the rejection is maintained.

With respect to the rejection over prior art, applicant argues that the slow curing feature obtained with a composition having the specific viscosity, conversion ratio, dynamic shear modulus and dynamic tensile modulus is not taught by the cited prior art.

J '825: Applicant argues that J '825 discloses rapid radiation curing in the examples and does not disclose a slow curing composition. Applicant further argue that J '825 does not describe the thixotropic

Art Unit: 1711

agent (E) in the instant claims. Applicant further argues that the comparative evidence in the instant specification shows compositions without a thixotropic agent (E) that have inferior adhesive strength immediately after exposure to radiation. These arguments are not persuasive for the following reasons. The claim terms “thixotropic agent” do not define any particular thixotropic agent and, thus, is considered to include fumed silica. It is agreed that J ‘825 does not suggest a thixotropic agent such as glass balloon, Q-Cell 520 or surface treated calcium carbonate, Viscolite U. The data in Table 5 of applicant’s specification shows that conversion of monomer is lower immediately after irradiation when one of these thixotropic agents is present. This appears to be only the expected results since the thixotropic agent is known to block irradiation exposure to the composition. See J ‘466. It is noted that the compressive shear bond strength is improved when the thixotropic agent such as glass balloon, Q-Cell 520 or surface treated calcium carbonate, Viscolite U, is employed. However, the compositions in Examples 1-4 without any thixotropic agent are not considered to be representative of J ‘825 since J’825 teaches compositions comprising fumed silica. Applicant’s comparative examples are not representative of J ‘825.

J ‘248: Applicant argues that J ‘248 does not teach a composition comprising a thixotropic agent in the volume percent set forth in the instant claims. This argument is not persuasive because J ‘248 teaches adding fillers such as silica, talc, calcium carbonate and glass fibers and that the fillers increase the viscosity of the composition (paragraph 19, page 2). The compositions in Examples 1-4 without any thixotropic agent are not considered to be representative of J ‘248 since J ‘248 teaches compositions comprising the fillers noted above. Applicant’s comparative examples are not representative of J ‘248.

J’466: Applicant argue that J ‘466 teaches large amounts of calcium carbonate as filler and thus the feature of gradually curing after irradiation cannot be obtained. This argument is not persuasive because applicant claims a composition, not a method, and thus relies upon the composition for patentability. Compositions disclosed in the prior art comprising components as defined in the instant claims would be expected to also provide the same properties in the absence of evidence to the contrary.

Art Unit: 1711

It is noted that J '466 teaches several kinds of filler corresponding to applicant's thixotropic agent (see [0070]) and that J '466 teaches using 0-1000 parts by weight of filler per 100 parts by weight of polymer A. The amount of calcium carbonate in the Examples is 60 parts by weight per 100 parts by weight organic polymer A1-A7. The % by volume of thixotropic agent set forth in the instant claims would be expected to at least overlap the % volume resulting from the parts by weight taught by J '466, in the absence of evidence to the contrary. Applicant argues that J '466 teaches using only a small amount, specifically 5 or 8 parts by weight, of a compound corresponding to instantly claimed compound C. Applicant is reminded that a prior art disclosure is not limited to the examples. J '466 teaches that using 0.5 to 20 parts by weight polymerizable compound B to 100 parts by weight polymer A is preferred. Applicant claims 15-100 parts by weight polymerizable compound B and does not specify whether the parts by weight are based on the compound A or on the weight of the total composition.

EP '049 in combination with J '241: Applicant argues that there is no teaching in the references to combine the teachings to add a photoinitiator to the compositions disclosed by EP '049. This argument is not persuasive because, as set forth in the rejection, EP '049 teaches compositions comprising a photocurable substance and J '241 teaches analogous compositions comprising the same kinds of photocurable substances and a photoinitiator. Applicant further argues that the references do not teach the slow-curing property set forth in the instant claims. As set forth in the Office Action, compositions taught in the prior art comprising components within the instantly claimed definitions and within the parts by weight set forth in the instant claims would be expected to have the same properties as the instantly claimed compositions, in the absence of evidence to the contrary. The instant claims are not commensurate in scope with the compositions shown in the instant specification to have the properties relied upon for patentability. Furthermore, there is no comparative data in the instant specification that is representative of the cited prior art.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 5-8,10 and 12-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 fails to set forth the total weight upon which the parts by weight are based, therefor the parts by weight of components are not clearly defined. See page 27 of the specification, wherein it is disclosed that the parts by weight are based upon 100 parts by weight of component (A).

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 6-8, 10 and 13-21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over J 06080825 (machine translation from JPO website). The compositions may contain fumed silica and other inorganic fillers to improve physical properties and chemical resistance. Fumed silica would be expected to function as a thixotropic agent, as is well known in the composition art. See the Abstract, claims and paragraph [0019].

With respect to the properties of the adhesive composition set forth in instant claim 1, the compositions disclosed by the reference would have been expected to have properties within the ranges set forth in the instant claims since the components of the compositions meet the definitions of the required components, including parts by weight, set forth in the instant claims in the absence of evidence

Art Unit: 1711

to the contrary. The data presented in J '825 shows the resulting properties for the same composition fully cured by ultraviolet radiation or by moisture. J '825 does not measure conversion of monomers immediately after exposure to radiation. There is no evidence of record that the properties obtained immediately after exposure to radiation and then after 24 hour aging at 25⁰C of the disclosed compositions would be different from the properties set forth in the instant claims. Also it is not clear, with respect to the instant claims, what causes the 10 to 70 % conversion of compounds "immediately after exposure" to radiation. Is exposure to radiation stopped after a desired conversion is reached? Is the conversion limited by the components of the composition?

Claims 1, 3, 6-8, 10 and 13-21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over J 06-228248 (translation provided by applicant). J '248 teaches adding fillers such as silica, talc, calcium carbonate and glass fibers and that the fillers increase the viscosity of the composition (paragraph 19, page 2). See the Abstract, claims, and paragraphs [0019] and [0020] to [0022]. J '248 teaches that radiation after application increases viscosity and heat resistance and that curing is promoted by moisture-curing with lapse of time. J '248 measures the tensile strength and elongation of the cured compositions. With respect to the properties of the adhesive composition set forth in claim 1, the compositions disclosed by the reference would be expected to have properties within the ranges set forth in the instant claims since the components of the compositions meet the definitions, including parts by weight, of the required components set forth in the instant claims.

Claims 1, 3, 6-8, 10 and 13-21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over J 08-325466 (machine translation). See the Abstract, claims, and paragraphs [0070] and [0057]-[0059]. It is noted that J '466 teaches several kinds of filler corresponding to applicant's thixotropic agent (see[0070]). J '466 teaches using 0-1000 parts by weight of

Art Unit: 1711

filler per 100 parts by weight of polymer A. The amount of calcium carbonate in the Examples is 60 parts by weight per 100 parts by weight organic polymer A1-A7. The % by volume of thixotropic agent set forth in the instant claims would be expected to at least overlap the % volume resulting from the parts by weight taught by J '466, in the absence of evidence to the contrary. With respect to the properties of the adhesive composition set forth in claim 1, the compositions disclosed by the reference would have been expected to have properties within the ranges set forth in the instant claims since the components of the compositions meet the definitions of the required components set forth in the instant claims.

With respect to each of the rejections set forth above: The burden is hereby shifted to applicant to establish by effective argument and/or objective evidence that the prior art product(s) or process(es) do not necessarily possess the characteristics of the claimed products or processes. Note In re Fitzgerald, 205 USPQ 594 (CCPA 1980). The reference discloses all the limitations of the claim(s) except a property or function and the examiner cannot determine whether or not the reference inherently possesses properties or functions which anticipate the claimed invention. See MPEP 2112-2112.02. Note In re Spada, 911 F. 2d 705, 709, 15 UPQ2d 1655, 1658 (Fed. Cir. 1990), "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not". Note In re Best, 562 F. 2d 775, 195 USPQ 433 (CCPA 1977). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 5-8, 10 and 12-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0035049 in view of J 55-036241. EP '049 discloses compositions comprising an organic polymer having at least one hydrolyzable silicon-containing group and a photocurable substance. The photocurable substances specifically taught are (meth)acrylic monomers or oligomers (pages 2-3). Thixotropic agents may be added (page 4, line 7). Curing agents are taught on page 4, however, photoinitiators for the photocurable substances are not mentioned. J '241 discloses adhesive compositions comprising the same organic polymer having a hydrolyzable silicon-containing group and a photocurable substance. J '241 teaches adding a photosensitizer, such as benzophenone.

It would have been obvious to one skilled in the art at the time of the invention to include a photosensitizer, as taught by J '241 in analogous compositions, in the compositions disclosed by EP '049. EP '049 provides motivation by teaching compositions comprising a photocurable substance. J '241 provides motivation by teaching analogous compositions comprising the same kinds of photocurable substances.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. J '969 discloses adhesive compositions comprising a compound (A) that contains a hydrolyzable epoxy group and a polymerizable methacrylamido group. Photocuring agents and photosensitizers are taught. J '969 teaches initial adhesion or temporary adhesion is carried out using active energy rays and then main adhesion or fixation can be carried out (translation page 6, last paragraph, to page 7, lines 1-2, and Application example 2).

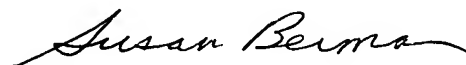
Art Unit: 1711

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB
March 3, 2006



Susan W Berman
Primary Examiner
Art Unit 1711